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AUDIENCE ATTENTION AS A BASIS FOR EVALUATING INTERPRETIVE PRESENTATIONS

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Ronald E. Dick is a doctoral candidate in the College of Forest Resources, University of Washington, Seattle. At the time this was written, Erik Myklestad and J. Alan Wagar were, respectively, research technician and project leader of the Environmental Interpretation Research Project, then maintained by the Pacific Northwest Forest and Range Experiment Station in cooperation with the University of Washington. Wagar has since become leader of the Forest Recreation Research Project maintained by the Northeastern Forest Experiment Station in cooperation with the State University of New York College of Environmental Science and Forestry, Syracuse, New York.

AUDIENCE ATTENTION AS A BASIS FOR EVALUATING INTERPRETIVE PRESENTATIONS

Reference Abstract

Dick, Ronald E., Erik Myklestad, and J. Alan Wagar

1975. Audience attention as a basis for evaluating interpretive presentations.
USDA For. Serv. Res. Pap. PNW-198, 7 p., illus. Pacific Northwest
Forest and Range Experiment Station, Portland, Oregon.

Unobtrusive procedures for observing audience attention were developed for evaluating effectiveness of interpretive presentations. Graphed results identified markedly different attention levels within a presentation and between presentations. Field personnel can apply the procedures to diagnose strengths and weaknesses in their presentations.

KEYWORDS: Recreation, information and education.

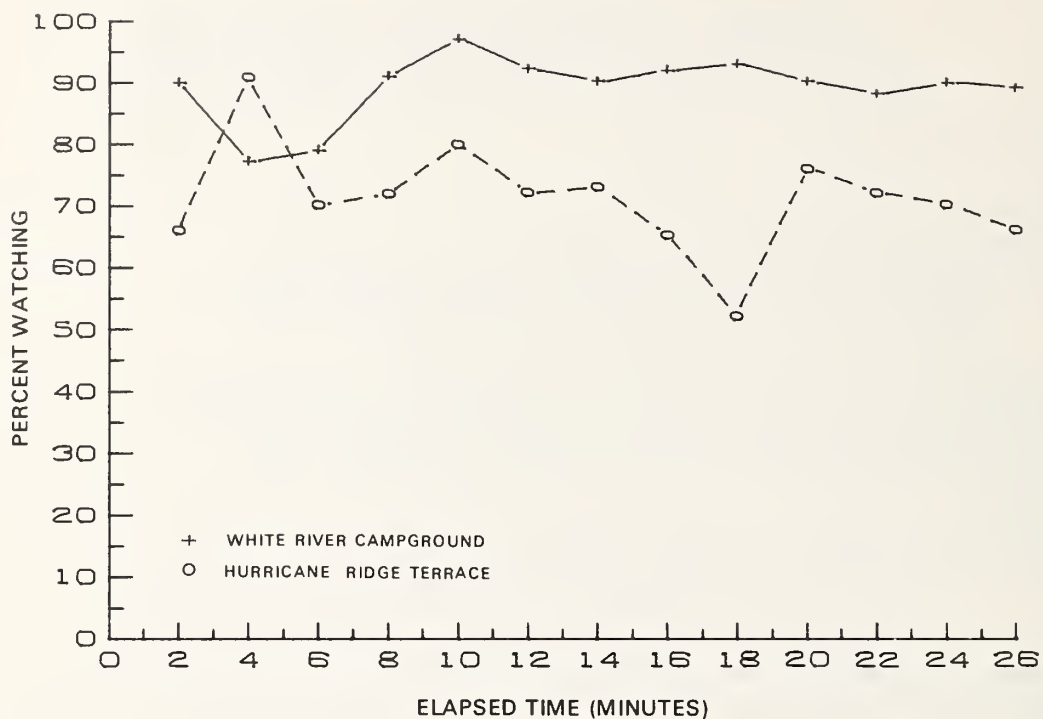
RESEARCH SUMMARY Research Paper PNW-198 1975

In a search for unobtrusive ways to evaluate and upgrade the effectiveness of such interpretive presentations as campfire programs and guided nature walks, a direct observation technique was developed. At each of two naturalist talks, a puppet show, and an audiovisual presentation, several audiences were studied. At frequent intervals two observers recorded the percentage of an audience watching the speaker or presentation. Observations were normally at 1-minute intervals for presentations of 20 minutes or less and at 2-minute intervals for longer presentations. Although people sometimes watch a presentation while thinking of other matters, percent watching appeared to correlate well with general audience responsiveness to a speaker or presentation.

Under ideal conditions (audience size under 20, good lighting, observers facing audience), percent watching was determined

by watching people's eyes. For less ideal conditions, orientation of people's heads toward a speaker or presentation was accepted as indicating attention. Although this introduced another source of error, such error did not obscure the great differences that occurred in percent watching.

After very little practice, the two observers consistently recorded comparable results. Graphed observations showed that differences in attention levels were readily detected both within a presentation and between presentations. Such differences permit field personnel to identify strengths and weaknesses in interpretive presentations. This is facilitated by tape recording the presentations for later comparison with graphs and by noting apparent causes of attention or inattention in the "remarks" column of the observation form.



Comparison of audience attention at campfire program, White River Campground, Mount Rainier National Park and at naturalist talk on terrace, Hurricane Ridge Visitor Center, Olympic National Park.

Introduction

In the United States, agencies involved in outdoor recreation have interpreted natural and cultural history for their visitors for many years. However, the effectiveness of these presentations has seldom been evaluated. Attempts at evaluation have usually meant observation of the interpreter's technique by a supervisor. Although supervisors can provide important guidance, the only sure test of effectiveness is to examine what we are trying to affect--the audience.

Perhaps the surest way to determine communication effectiveness is to administer a battery of questions testing the extent to which an audience has understood and, in some cases, been persuaded or convinced. However, for recreational settings, frequent questioning places an unacceptable burden on visitors. For routine monitoring, some less burdensome procedure is needed.

Among the many factors influencing the effectiveness of communication, prior investigations have shown that a message's ability to attract and hold attention is fundamental to its effectiveness.^{1/} Communication occurs only when the intended audience pays heed to incoming messages.

This paper focuses on audience attention. Specifically, it describes a direct observation method that permits field personnel to monitor audience attention to an ongoing interpretive presentation. By recording attention levels at intervals throughout such presentations, this unobtrusive feedback procedure facilitates evaluation and improvement.

^{1/}Carl I. Hovland, Irving L. Janis, and Harold H. Kelley. *Communication and persuasion*. Yale University Press, New Haven. 315 p., 1953.

The Presentations Studied

Three types of presentations observed during the summer of 1973 are discussed: a "canned" audiovisual program, puppet shows, and naturalist talks. The audiovisual program was at the Paradise Visitor Center in Mount Rainier National Park, Washington; it interpreted relationships among Park fauna, using a rear screen slide projection console surrounded by cases of mounted animals. The slides and shifting illumination of the cases were synchronized with an audiotape. Three broad carpeted risers provided informal seating for the presentation, which lasted 10 minutes and was given many times a day. The two observers used the many audiences at this automated exhibit for training, comparing their results for each audience observed and discussing reasons for differences.

The puppet theater was a part of the exhibition "Energy and Its Relation to Man and the Environment" presented at the Pacific Science Center, Seattle, Washington. The puppeteers remained the same throughout the observations. However, improvisation was a major aspect of the presentations. The shows were given whenever enough visitors were available for an audience. Members of the audience could sit, stand, or recline on pillows in a triangular floor area. The shows were presented in an area where they competed with other exhibits.

Naturalist talks were observed at the Hurricane Ridge Visitor Center, Olympic National Park, Washington, and the White River Campground, Mount Rainier National Park. The talks at Hurricane Ridge covered the flora, fauna, and geology of Olympic National Park and were given by Park interpreters on the terrace overlooking the Olympic Mountains. The talks at White River Campground centered around Indian legends and were given by Park interpreters

at the campground amphitheater. In both settings, members of the audience sat on wooden benches and had many opportunities to be distracted by such things as wildlife, weather, and scenery.

Procedures

Because interpretive presentations are continuous, ongoing communications, questions to an audience would either interrupt this ongoing process or would investigate it as a past event. Therefore, five nonverbal indicators were selected for analyzing fluctuations in audience attention: percentage watching the presentation, fidgeting, talking, leaving during the presentation, and response to instructions given during the presentation.

Initial observations quickly showed that the percentage of the audience watching the presentation, hereafter called "percent watching," was the most workable measure of audience attention for the interpretive presentations studied. Although individuals sometimes watch a presentation while thinking of other things, percent watching appeared to correlate well with general audience responsiveness to a speaker or presentation.

Observing visitors' eyes was possible only with small audiences (under 20), good lighting conditions, and with the observers facing the audience. When conditions were less than ideal, the orientation of people's heads toward the presentation was used as an operational definition of audience attention. This introduced an additional source of error but did not obscure the great differences that occurred in percent watching.

By observation of either visitors' eyes or the direction of their heads, data were collected to determine (1) the consistency of results obtained by two observers, (2) how many people were actually paying

attention at different points in the presentation, and (3) factors having positive or negative effects on audience attention.

At preselected intervals, two observers recorded the number of people in the audience and the number actually watching the presentation. The usual frequency of scanning was once a minute for programs of 20 minutes or less and once every 2 minutes for longer presentations. Persons too well hidden to be observed were not considered to be part of the audience. The two observers began each scan at exactly the same time and used the same scanning patterns--e.g., front to back, left to right.

Differences in measurement inevitably occur when two observers examine the same segment of the audience at slightly different times. Fortunately, differences from this source were slight relative to the substantial differences found in percent watching. The two observers scanned for attention or nonattention--depending on which was the less predominant. If more people were paying attention than not, observers counted those not paying attention, and vice versa.

Results and Discussion

Direct observation of an audience can provide reliable feedback on visitor attention to an interpretive presentation. Although the two observers in this study did not always record exactly the same "percent watching" scores, they consistently recorded the same patterns of fluctuation in audience attention (figs. 1, 2, and 3).

Methodical observation can identify differences in audience attention within a presentation (figs. 1, 2, and 3) and between presentations (fig. 4). In addition it permits evaluation of efforts to increase attention to interpretive presentations.

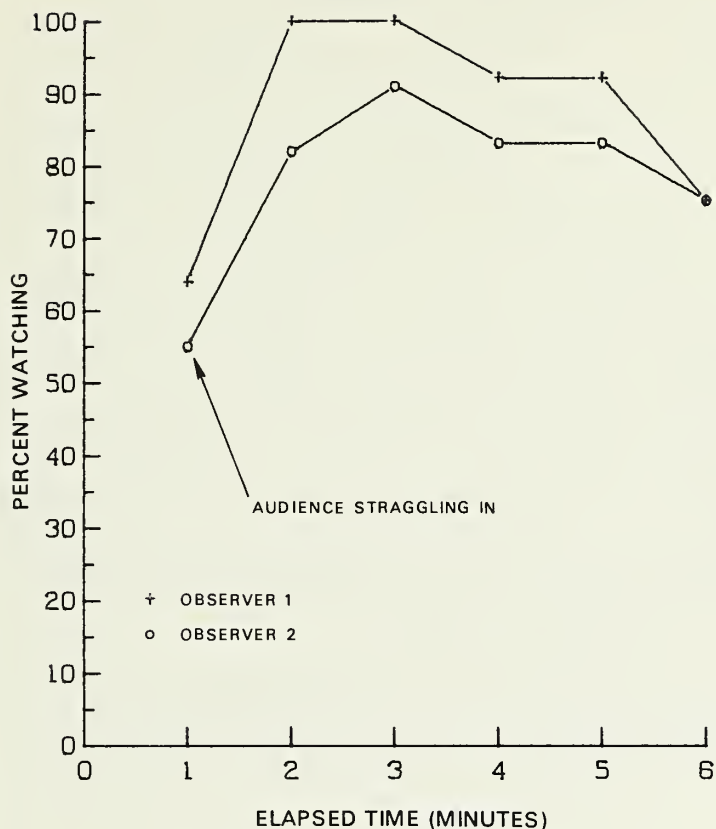


Figure 1.--Percent of audience watching presentation, as determined by observation of visitors' eyes--*audiovisual* presentation on Park fauna, Paradise Visitor Center, Mount Rainier National Park, 3:45 p.m., August 13, 1973.

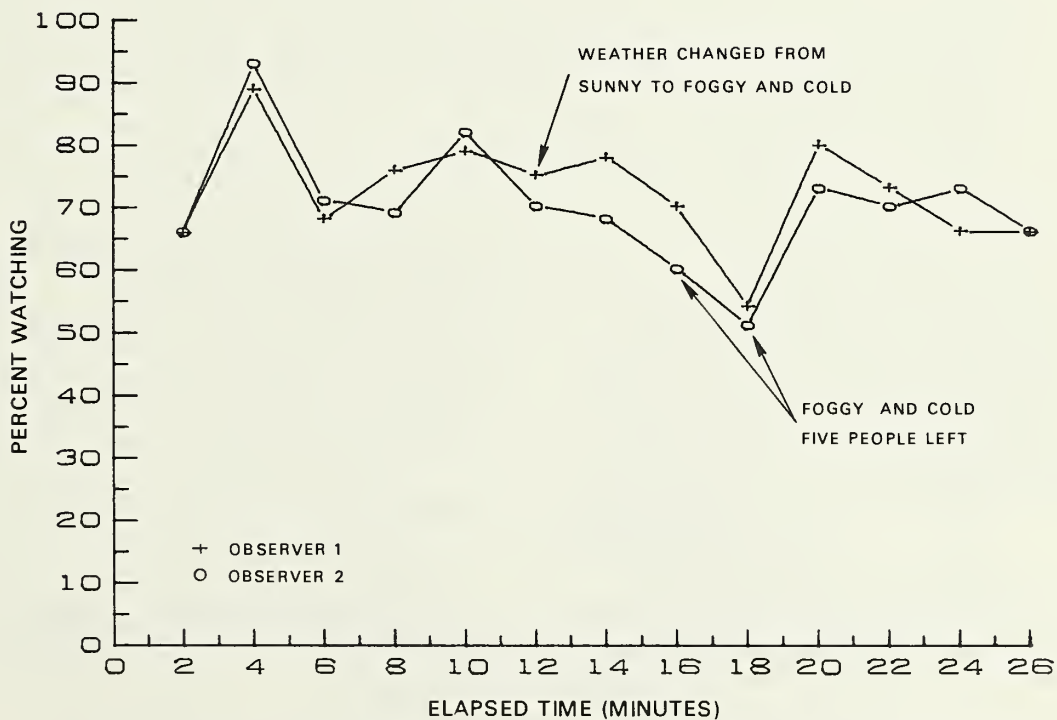


Figure 2.--Percent of audience watching presentation, as determined by observation of visitors' eyes--lecture on terrace at Hurricane Ridge Visitor Center, Olympic National Park, 1:30 p.m., August 22, 1973.

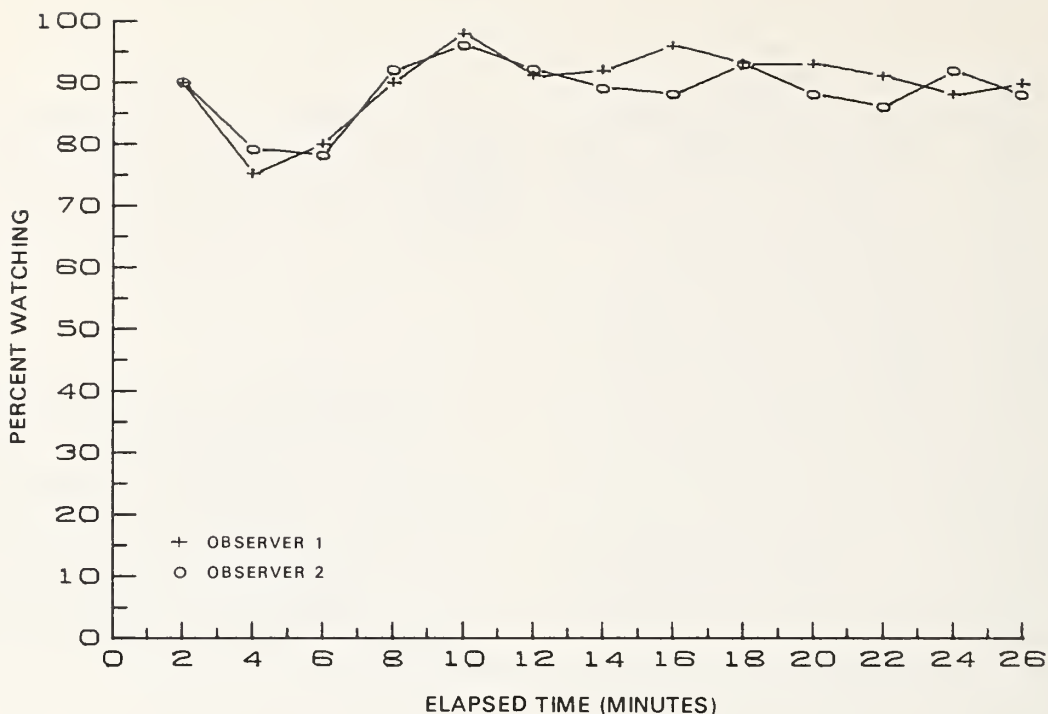


Figure 3.--Percent of audience watching presentation, as determined from direction of visitors' heads--campfire talk at White River Campground amphitheater, Mount Rainier National Park, 8:00 p.m., August 13, 1973.

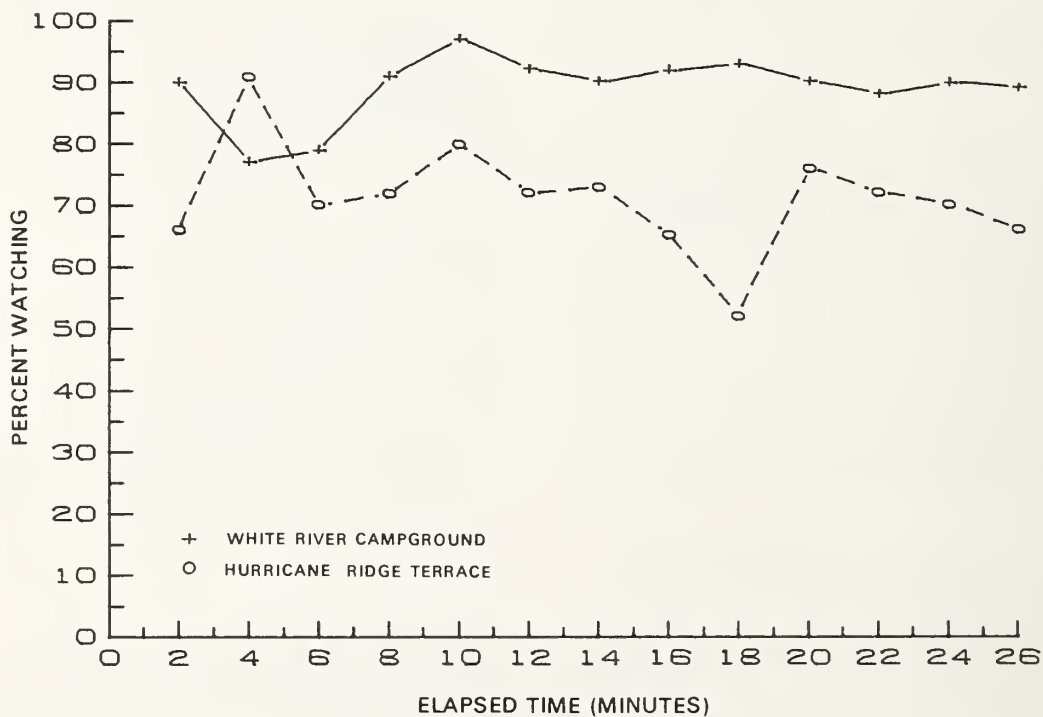


Figure 4.--Comparison of percent of audience watching presentations at Hurricane Ridge Visitor Center (fig. 2) and White River Campground (fig. 3). (Data from the two observers have been averaged.)

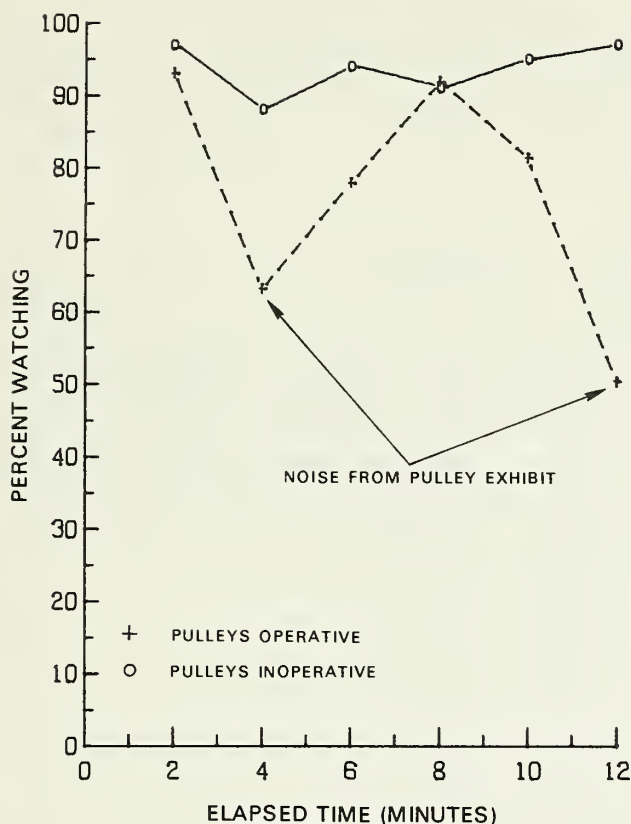


Figure 5.--Percent of audience watching puppet show before and after noise from a nearby pulley exhibit was eliminated, Pacific Science Center, Seattle, Washington, 1:30 p.m. (pulleys operative) and 3:30 p.m. (pulleys inoperative), August 8, 1973. Percent watching determined by observation of visitors' eyes.

For example, figure 5 shows attention levels for a puppet show before and after distracting noise from a nearby exhibit was eliminated. An exhibit demonstrating pulleys created much clatter, especially when chords were released, permitting weights to drop. Observers' remarks for one puppet show identified low attention levels at the 4- and 12-minute points as resulting from distracting noise at the pulley exhibit. During the second show, the pulley exhibit was inoperative and attention levels remained consistently high.

Application

The ideal position for observers is to one side of the audience, near the front, elevated, and at least partly screened from view by the audience. Because conditions seldom are this ideal, observers must select or develop the best position available.

For complete records, observers should use a printed form (fig. 6). Records are easiest to interpret when graphed. In conjunction with remarks on the observation

RECORD OF AUDIENCE ATTENTION TO INTERPRETIVE PRESENTATION

Title and description of presentation: <i>Naturalist Talk, White River (Campground), HIRN?</i>	Attention defined as Eye contact <input type="checkbox"/> Head direction <input checked="" type="checkbox"/>	Observer: <i>R.L. Dick</i> Date <i>8/13/73</i>
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TIME Started <i>8:07 pm</i> Plus	ATTENTION		AUDIENCE SIZE ²			Percent giving attention	REMARKS
	Number showing attent. ¹	inattent. ¹	At beginning arrivals	departures	Subtotal		
01 02	<i>43</i>	<i>4</i>			<i>47</i>	<i>91</i>	<i>Building Campfire</i>
02 04	<i>36</i>	<i>12</i>	<i>1</i>		<i>48</i>	<i>75</i>	<i>Campfire smoke on audience</i>
03 06	<i>40</i>	<i>10</i>	<i>2</i>		<i>50</i>	<i>80</i>	<i>" " "</i>
04 08	<i>45</i>	<i>5</i>			<i>50</i>	<i>90</i>	<i>Beginning of Indian legends</i>
05 10	<i>51</i>	<i>1</i>	<i>2</i>		<i>52</i>	<i>98</i>	
06 12	<i>58</i>	<i>6</i>	<i>12</i>		<i>64</i>	<i>91</i>	
07 14	<i>57</i>	<i>5</i>		<i>2</i>	<i>62</i>	<i>92</i>	
08 16	<i>64</i>	<i>3</i>	<i>5</i>		<i>67</i>	<i>96</i>	
09 18	<i>64</i>	<i>5</i>	<i>2</i>		<i>69</i>	<i>93</i>	
10 20	<i>64</i>	<i>5</i>			<i>69</i>	<i>93</i>	
11 22	<i>63</i>	<i>6</i>			<i>69</i>	<i>91</i>	
12 24	<i>63</i>	<i>9</i>	<i>3</i>		<i>72</i>	<i>88</i>	
13 26	<i>65</i>	<i>7</i>			<i>72</i>	<i>90</i>	
14 28							
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25 50							
26 52							
27 54							
28 56							
29 58							
30 60							

Ended

8:33 pm

Audience size

at end: *72*

¹ Record attention or inattention, whichever is smaller.

Additional remarks (Identify by time interval and use back of form if necessary):

² Subtotals and percentages should be computed in office with calculator.

Figure 6.--Form for recording audience attention to interpretive presentations.

form, a tape recording of a presentation may permit fluctuation in attention to be associated with factors either within or outside the presentation. Videotaping the presentation might be even more helpful.

One trained observer can usually observe attention in audiences up to about 40 people. Two or more observers can divide a larger audience into two or more observation zones. Or a single observer can let one part of the audience represent the total. In doing so, he should be careful to avoid a preponderance of similar people--such as youth groups, those who sit in front rows, tour groups, etc.

Observers should be trained in small groups so they can compare results and develop reliability. During training, all observers should synchronize their scanning intervals and patterns so that they observe the same people at approximately the same times. Also during training, each observer should examine the same people; that is, people hidden from any observer should be ignored by all.

With practice, observers will be able to score audience attention by looking at entire sections of the audience rather than sequentially observing each individual.

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The mission of the PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION is to provide the knowledge, technology, and alternatives for present and future protection, management, and use of forest, range, and related environments.

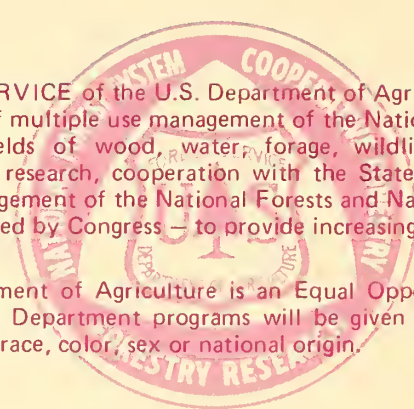
Within this overall mission, the Station conducts and stimulates research to facilitate and to accelerate progress toward the following goals:

1. Providing safe and efficient technology for inventory, protection, and use of resources.
2. Developing and evaluating alternative methods and levels of resource management.
3. Achieving optimum sustained resource productivity consistent with maintaining a high quality forest environment.

The area of research encompasses Oregon, Washington, Alaska, and, in some cases, California, Hawaii, the Western States, and the Nation. Results of the research are made available promptly. Project headquarters are at:

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Juneau, Alaska	Olympia, Washington
Bend, Oregon	Seattle, Washington
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